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THE OPERATIVE TREATMENT OF CHRONIC GLAUCOMA OTHER THAN BY IRIDECTOMY.

A HISTORICAL COMMENTARY.*

BY CHARLES F. BEARD, M.D.,
CHICAGO, ILL.

The history of glaucoma, and all that is connected with the disease, as we regard it to-day, virtually extends back but little over half a century. It is true that Middlemore, of London, suggested scleral puncture for the relief of grave affections of the eye, characterized by abnormal hardness of the globe and progressive loss of sight, about eighty years ago, and that the great Scotch clinician McKenzie, actually made the operation in such a case about the year 1830. McKenzie considered the measure only a palliative one. Indeed, glaucoma in any form was deemed incurable till the brilliant work of Albrecht von Graefe, which began subsequent to 1855. Graefe's first antiglaucomatous iridectomy was made in 1856, and his classic and epoch-making reports on the working of iridectomy in inflammatory glaucoma appeared in the years 1857 to 1859. Little had been learned even as to the symptomatology of the disorder till the study was taken up by Tavignot, the elder Desmarres and von Arlt, just prior to the discovery of the ophthalmoscope by Helmholtz, in 1851. These three listed most of the symptoms. They failed, however, to include anæsthesia of the cornea, the signs and changes in the fundus, and those relative to the visual and color fields. Ed. Jaeger, Arlt's predecessor, in 1854, was the first to note the peculiar appearance of the optic disc, but, strange to say, made the mistake of taking the excavation for a mound, or

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swelling. About the same time von Graefe discovered the arterial pulse, and in 1855 he found that the disc was cupped instead of elevated as Jaeger had supposed. This same acute observer, in 1856, cited contraction of the nasal field as a characteristic sign of glaucoma. In the same year H. Mueller called attention to the union between the peripheral portion of the iris and the cornea, though it seems that Donders had made the same observation, i.e., the obliteration of the iris angle, in 1855, attributing it to the hypertension of the globe. In 1868 von Graefe was already aware of the pernicious effects of mydriatics upon glaucomatous eyes, and employed the extract of physostigmin, or Calabar bean, to counteract the dilation of the pupil; while Laqueur, in 1876, was the first to recommend eserin for the same purpose. About the same time Adolf Weber, of Darmstadt, also discovered the miotic properties of this drug.

The operative measures for chronic glaucoma are divided into *intra-bulbar* and *extra-bulbar*. To the first, exclusive of iridectomy, belong the various forms of sclerotomy, posterior and anterior. During the twenty years subsequent to the interventions of Middlemore and McKenzie only posterior scleral puncture was resorted to, though the elder Desmarres, about 1847, had cured a case of "inflammation of the aqueous membrane, of an intermittent character, with insupportable pain," by a simple paracentesis of the cornea, which was doubtless, in reality glaucoma. Hancock, in 1860, on the theory that glaucoma was due to contracture of the circular fibres of the ciliary muscle, strangling the vessels and nerves, tried replacing iridectomy by division of this muscle, under the name *intra-ocular myotomy*. With a Beer's knife he made an oblique section beginning at the limbus, passing outward and backward, and engaging sclera and muscle, between exterior and inferior. There were several modifications of this procedure by other operators.

DeWecker, in 1865, having studied the nature of the scleral scars following the operation of iridectomy for glaucoma, and having noted their porosity, was the first to conceive the idea that a filtration cicatrix was the essential thing in such surgery and that the excision of the iris was superfluous. Sclerotomy to replace iridectomy, however, was introduced by Stellwag von Carion, in 1868. But Stellwag did not make sclerotomy after the idea of DeWecker, i.e., to obtain a filtration scar; but rather to relieve what he imagined as regarded the malady in question to be the too great rigidity of the sclera, particularly as concerned the outermost fibres. He made a large, very oblique

incision of the sclera, posterior to the corneal limbus. Among the many theories advanced to account for the high intra-ocular tension was that of a low grade of inflammation of the sclera, with thickening and contraction of that tunic, especially of its outermost fibres, and to this was directed Stellwag's sclerotomy. He later fell in line with DeWecker, and abandoned posterior for anterior sclerotomy. Then followed the different more or less ingenious modes of anterior sclerotomy. Prominent early originators in this field were DeWecker, Quaglino and Mauthner, who elaborated the technic, and popularized the procedure. In 1883, Panas gave a method of anterior sclerotomy which he called *oulétomie,* specially destined, as its name implies, for incising the cicatrix in case of relapsing glaucoma after iridectomy, where adhesions and inclusions of the iris had occurred. This consisted in making the usual punctures with a very narrow Graefe knife near the ends of the remaining cicatrix, and so completing the section as to include the entangled iris and scleral scar, but leaving intact a narrow bridge of conjunctiva. At times he also divided the latter. DeWecker made a similar operation which was named "cicatrisotomy." These two procedures might be named secondary sclerotomies.

It is highly probable that in all these primary, clean anterior sclerotomies that the paracentesis is the therapeutic factor, and not the peculiar manner of the incision. True the relief is always immediate, and often lasting. To filtration cicatrices we shall return.

Another form of intra-bulbar operation is that which concerns both the iris and the sclera. It might be a combination of sclerotomy and iridectomy, (sclero-iridectomy) as first made by the elder Terson in 1885; or sclerotomy with incision of the iris, (sclero-iritomy) like that of Nicati, dating from 1892, and the *internal irido-sclerotomy* of Vicentiis, devised in 1893, or, sclerotomy with tearing of the iris, (sclero-dialysis) first practiced by DeWecker, in 1894, and Chibret's operation made in 1897. This surgeon pushed a keratome or Graefe knife into the anterior chamber through a 3 or 4 mm. long wound canal, engaged the iris with the point and pushed on, making irido-dialysis. He would repeat this in different meridians, as many as 5 or 6 times. Some of these measures are not essentially different, as regards their effects, from the ordinary iridectomy, which is not under discussion. It may be permitted in passing to refer to one form of sclero-iridectomy, out of the ordinary, viz., that of Logetschnikow, of St. Petersburg, first described in 1894. Here the

excision of iris comprises but a tiny section at the extreme periphery, and it is destined as a sluice-gate only. As the cornea and sphincter are left intact miotics may be still employed to advantage. Pope made a similar iridectomy for optical purposes in 1871.

Other measures in this category, also, seem to act in a way quite different from the ordinary iridectomy.

On the principle that glaucoma is the result of *anterior retention* are based those operations whose object is the freeing of the union of the iris and the cornea in the angle of the anterior chamber, or of establishing communication between the contents of the anterior chamber and the plexus of Schlemm. To these belong Vicentiis' and Nicati's incisions of the irien angle, and DeWecker's and other forms of irido-dialysis. Tailor, in 1891-6, demonstrated by experiments upon the eyes of dogs that operations like that of Vicentiis do put into communication the anterior chamber and the intra-trabecular spaces, and that they give access to the inter-fascicular spaces of the ciliary muscle when these also are engaged by the knife. Solution of fluorescin injected into the anterior chamber disappeared more quickly in the operated than it did in the control eyes; and, inversely, when injected into the veins the solution appeared earlier in the anterior chamber of the operated than in the unoperated eyes.

Herbert and Priestley Smith, in the last years of the 19th century and the first years of the 20th, believing that subconjunctival sclero-corneal fistula was the essential thing in operations for chronic glaucoma, made artificial incarceration of the iris to produce this fistulous scar. Their methods were something after the manner of the old irido-encleisis made by Adams in 1812, and that of Himlay, in 1843. Holth, of Christiania, Norway, averred, before the French Society of Ophthalmology, in 1906, that he had never observed a filtration scar after a correct iridectomy for glaucoma, but had seen it only in those instances where existed an incarceration of the iris in one of the angles of the wound, thus constituting the necessary filtration cicatrix. With this idea he made irido-encleisis in 127 cases of chronic glaucoma, and with results far superior to any he had obtained with classic iridectomy.

Trepanation of the Sclera, or Sclerectomy.—Still another form of intra-bulbar surgery for chronic glaucoma having for its object the much-sought-after filtration scar, is that by which a small portion of the sclera adjacent to the limbus is excised. Sclerectomy to lower intra-ocular tension was, I believe, first

done by Argyll-Robertson, in 1876, but the trepanation was here an equatorial one for absolute glaucoma. Recently such procedures have been rather extensively practiced for chronic glaucoma by Lagrange, and Rochon-Duvigneaud, but nearly always in conjunction with a generous iridectomy. Still later, in 1908, Holth, just alluded to, not having been quite satisfied with his irido-encleisis, devised a modification of Lagrange's sclerectomy. He now makes a long, slanting, subconjunctival incision, with a lance keratome, as if for an iridectomy, from one lip of which,—more often the anterior one,—he removes a crescentic piece of the sclera, by means of a punch. He then makes a tiny, extremely peripheral iridectomy, after the manner of Logetschnikow, not for any therapeutic effect upon the glaucomatous process, but to prevent hernia or incarceration of the iris. Holth claims for his method greater freedom from such accidents as expulsive hæmorrhage, rupture of the zonule, and greater certainty of obtaining a true and lasting fistulous or filtration scar.

Cyclodialysis, or the establishment of communication between the anterior chamber and the supra-choroided space. This is yet another mode of intra-bulbar surgery for chronic glaucoma. A forerunner of the method may be found in an operation devised by Chibret, in 1883. This surgeon, in order to make a filtration scar, punctured the sclera very obliquely with a stop-lance, entering the anterior chamber through the angle of the iris. He reopened the wound daily, for a period of three weeks, either by pression massage over the cornea, or with the aid of a blunt instrument, which he poked through the wound. Fuchs found detachment of the choroid in about 10 per cent. of cases after iridectomy. In such instances the good effects of the operation are not apparent till after the subsidence of the detachments, which usually occurs in a few days. Fuchs thought these detachments were the result of tearing the uvea away from the sclera at the iridic angle, permitting the aqueous to enter the supra-choroidal space. This, in turn, led Axenfeld, in 1903, to suggest this as an explanation of the benefits derived from iridectomy. This consideration caused Heine, of Breslau, in 1904, to invent the operation of cyclodialysis. This consists in an attempt to make permanent communication between the anterior chamber and the supra-choroidal space. The good results which occasionally follow this procedure are probably due to freeing the angle of the anterior chamber and not to persistent choroidal detachment. It would seem that complications are more prone to follow this than most other operations for chronic glaucoma.

Extra-bulbar Methods.—Among the earlier surgical measures for the relief of chronic glaucoma, where the intervention did not directly involve the diseased eye itself, was *ciliary neurotomy,* introduced by Meyer and Secondi, in 1870. Then optico-ciliary neurotomy, proposed by Boucheron, in 1876, for eyes blind from absolute glaucoma. Then followed stretching or elongation, and even the plucking out, of the external branch of the nasal or infra-trochlear nerve, originated by Badal, in 1883. None of these several procedures ever accomplished much more than to afford relief from pain, temporary lessening of tension and other symptoms, hence, as true curative agents proved but illusory.

On the theory that the ciliary ganglion regulates the circulation of the anterior segment of the eye, Rohmer, in 1902, tried extirpation of this body, by Krönlein's operation, in painful absolute glaucoma. The pain was relieved but not the tension. Ciliary neurotomy would have accomplished the same result in a simpler manner.

Abadie, of Paris, in 1897, inspired by the theories and experiments of Wegner, which dated from 1866, and assumed that glaucoma was due to hypersecretion of liquid within the eye induced by vaso-motor excitation, conceived the idea that ablation of the superior cervical ganglion of the great sympathetic nerve would be an advantage in the treatment. But it was Jonnesco, of Bucharest, in 1898, he of stovain-cocain fame, who made the first sympathectomy for this purpose. This operation has since been rather extensively resorted to in various parts of the world, but, while the results have been in a measure effective, they have been, on the whole, far from brilliant, and disaster and even death have been known to follow; and whatever was gained by the measure has most often been dissipated by time.

Electricity.—Both the galvanic and the faradic currents have been brought to serve as agents in the extra-bulbar treatment of chronic glaucoma. As in sympathectomy, on the principle that chronic glaucoma is the result of vaso-motor excitation, Allard, in 1899, had the idea to modify this excitability by the application of a strong galvanic current to the sympathetic nerve. He employed a negative electrode whose surface was 300 square centimeters in area, applied to the nape of the neck, and a positive in the form of a strip of metal 8 or 10 inches long and one centimeter wide placed over the furrow corresponding to the anterior border of the sterno-mastoid muscle. The current was from 15 to 20 milliampères, and of an electromotive force of 20 volts. The applications were for 15 to 20 minutes 3 times a week

till 15 to 20 treatments were given. The results were reported as most satisfactory.

In cases of simple, chronic glaucoma, with marked optic atrophy, both the faradic and the combined currents have been applied to the lids of the affected eye, sometimes with apparent benefit.

Malaxation or Massage.—Digital massage was first proposed, in this connection, by Schenkl and Kline, in 1882, and first methodically executed by Dianoux, in 1883, but in conjunction with anterior sclerotomy. The manipulation tends to retard healing of the wound and to render the cicatrix more permeable. Later, in 1899, the practice was revived by Domec, of Dijon, and others. This sort of massage consists, in the main, of pressure, by the thumb over the center of the cornea, through one or the other lid. It is performed daily in sittings lasting from one to five minutes, preferably after punction of the cornea, but sometimes without previous surgical interference. Always, however, in conjunction with miotics. In some instances the massage is begun on the day of the operation—in others it is delayed for several days, or till after closure of the wound. By pression massage over the center of the cornea one expects to get dilation of the vessels and excretory channels around the rim of the anterior chamber, whereas, by pressure on the sclera the lens and the iris are forced forward and the tendency is to narrow and block said channels.

Subconjunctival Injections.—These have been made in chronic glaucoma just as they have in diseases like irido-cyclitis, detachment of the retina and others. The supposed effects being osmotic, counter-irritant, antiseptic, lymphagogue, etc. Weak solutions of sodium chlorid undoubtedly aid in restoring normal tension in an eye that has become too soft from traumatic uveitis. Whether or not they would work the other way in a glaucomatous eye the writer cannot say. Of late, Thomas and Fisher, of Oakland, California, have reported cases of glaucoma treated with marked benefit by subconjunctival injections of sodium citrate solution. Their theory is that glaucoma is essentially an œdema of the eye-ball caused by the presence in the globe of substances, like acids, which increase the affinity of the tissue colloids for water. The sodium citrate, we are told, is most potent to counteract the influence of the substances that increase said affinity, hence its efficacy in reducing the intraocular tension.

Choice of Operation.—Of all the surgical procedures here

under consideration, unfortunately none can be regarded as a cure in the true sense of the word; that is to say, as something that strikes directly at the cause of the morbid process, but merely as a means of counteracting the most conspicuous symptomatic factor of this process, viz., the hypertension. To combat this successfully is, at present, about all that one can hope to accomplish. To this end then it would seem that of the various measures we have mentioned those which consist either wholly or in part of some form of anterior sclerotomy promise most for the victim of chronic glaucoma. As before stated, the simplest of these gives at least temporary relief. The question then is how best to make the relief from this source most lasting. Shall it not be by imparting a certain permeability to the resulting cicatrix? Most likely.

The Filtration Scar.—What are the features most desirable in such a scar? Surely something other than permeability alone. A cystoid scar may be salutary or malicious according to its size and its anatomical constituents. If of proper proportions and make-up it may serve to maintain the equilibrium of tension without becoming a menace to the eye. If progressively large and the uvea be too greatly involved it becomes a source of irritation and danger. Holth makes a distinction between a *filtration scar* and a *fistulous scar*. The last is the more permeable but in that it usually means an incarceration of the iris its capacity for harm may overbalance whatever properties it possesses for good. It may even reach the stage of calling for surgical intervention on its own account. A serious drawback common to both forms of cystoid scar is that they offer a vulnerable point for the entrance of pathogenic bacteria. The kind most devoutly to be wished is, perhaps, one of moderate size and porosity, situated at the very outermost limits of the sclero-corneal junction. loosely covered by healthy conjunctiva, and without involvement of any portion of the uvea. It is possible to obtain such a scar by a simple incision, especially if followed by pression massage over the cornea. It is also possible by the incision combined with excision of a part of the sclera at the site of the wound, and the omission of the massage. Untoward consequences are less to be dreaded after these methods of antiglaucomatous surgery than most others. Grave complications like detachment of the choroid, rupture of the zonule, explosive choroidal hæmorrhage and malignant glaucoma, not uncommon after iridectomy, are almost unknown in relation to these operations. Moreover, if one fails in his object by a single intervention he is not only justified but

actually called upon to repeat the operation—even again and again if necessary.

In conclusion a few words of caution are deemed fitting. In no case, for instance, should one think of resorting to an intrabulbar operation for chronic glaucoma if by the use of miotics and attention to the general bodily condition the tension of the eyes could be kept within normal bounds. As regards the best means of keeping in touch with the degree of the intraocular tension ophthalmologists are rapidly learning that palpation is not to be relied upon, but that the intelligent employment of the tonometer is a prerequisite.

THE BACTERIOLOGY OF BLEPHARITIS ULCEROSA.

Sydney Stephenson (*The Ophthalmoscope*, July, 1909) finds that his experience agrees with the accepted teaching concerning the micro-organisms most frequently found present in cases of blepharitis ulcerosa rather than with Mr. Angus MacNab, who has stated that the "only constant and . . . . almost invariable organism found in these cases is the diplobacillus of Morax and Axenfeld." In fifty cases examined Stephenson found pure cultures of staphylococcus pyogenes aureus present in twenty-seven, pure cultures of staphylococcus pyogenes albus in eleven, while both of these micro-organisms were found in eight. The aureus was found associated in one case each with streptococcus, micrococcus citreus, a bacillus of the xerosis group, and the bacillus coli communis. Smears made from eleven of the fifty cases showed, in eight of them, nothing but Gram-negative cocci and diplococci which were subsequently found by culture to be either aureus, albus, or citreus. In two cases xerosis bacilli were found in addition to the pyococci and in one case diplobacilli, which were Gram-negative and morphologically the same as the Morax-Axenfeld organism.

Stephenson believes that one reason why his results were so different from those of MacNab is the fact that he used, as culture media, agar alone, upon which the Morax-Axenfeld diplobacillus grows with difficulty, if at all, whereas MacNab used Loëffler's blood serum and ascites-agar. However, in the smears examined the diplobacillus was found in less than ten per cent. of the cases which is a very low proportion as compared with MacNab's findings.

A CASE OF ORBITAL CYST.

By Adolf Alt, M.D., and W. E. Sauer, M.D.,
St. Louis, Mo.

On April 16th, 1908, A. W., 20 years old, was brought to me by Dr. H. J. C. Sieving, of this city, for consultation on account of a marked protrusion of the left eye.

The patient gave the history that about 7 years previously he had noticed a swelling on the nasal side of the left orbit which, although at times it appeared smaller, gradually grew larger and to its present size. There had been a period in which he saw double, but this phænomenon had disappeared several years ago. Medicines which he took internally for the cure of the affection had produced no change. At times he had had considerable pain in the orbit and fever.

When I saw him there was a very marked exophthalmus outward and downward, which could not be reduced by pressure. The elongated upper lid could only just barely protect the cornea when the eyes were closed. There was no pulsation and no vascular sound. On palpating the orbital contents, which on account of the exophthalmus was quite easy, I found a somewhat lobulated tumor reaching from behind the lacrimal sac region back into the orbit upwards and somewhat downwards behind the lower lid. This tumor seemed to be but loosely connected with the inner and upper orbital walls. Fluctuation seemed plainly preceptible. Yet the tumor could not be compressed. Holding the breath, bending the head downwards and coughing apparently did not change the size and position of the tumor.

The ophthalmoscope showed a papilla which was slightly œdematous, with blurred outlines; the retinal bloodvessels were thin. Vision=20/20?. The right eye was normal. Vision= 20/20.

The probability was that we had to deal with a large cystic tumor, probably of nasal origin, although the patient was not aware of any nasal disease.

After the necessary preliminaries, I operated on the case on April 18th with the intention of removing the cyst if possible, through a large incision through the nasal side of the upper lid. However, when laid bare, the cyst wall was seen to be as thin as tissue paper and at the first attempt of loosening it from its surroundings it broke and an astonishingly large amount of a

viscid mucus, slightly tinged with blood, ran out. By pressing the eyeball into the orbit another large quantity was squeezed out, thus showing that the cyst reached the apex of the orbit and probably somewhat to the temporal side of the eyeball posteriorly. Examination with the probe did not definitely reveal a communication between cyst and nasal cavity.

All attempts at removal of the cyst wall proving futile on account of its extreme thinness, we had to be satisfied with packing the cavity with iodoform gauze. Under this treatment the cavity gradually filled up from the depth, and when after about two weeks the patient returned home, the sac appeared perfectly obliterated, the eye was in its normal position with normal motility, and the slight fundus changes had disappeared. In discharging the patient I warned him that there was a great likelihood that the trouble might return and that whenever that should take place a more radical operation would have to be made to drain the cyst into the nose.

About three months later I received a letter from the patient stating that a swelling and some exophthalmus had reappeared together with fever. Yet in answer to my letter urging him to come at once for a further operation, he wrote that the symptoms had again disappeared.

The patient did not return to the city until the latter part of December, 1908. His exophthalmus was then about as prominent as when I had first seen him. There was a red painful swelling in the nasal part of the orbit, the patient had high fever and demanded immediate help. Being satisfied that we had now to deal with an infection and abscess formation, I proceded at once to make an incision. This was followed by the evacuation of a large amount of pus in which, however, no bacteria were found. A radical operation was refused, and on account of the patient's general condition, now that immediate relief was obtained, we thought it best to wait for some time. Accordingly the cavity was carefully washed out and packed. However, as the discharge did not disappear, although it grew gradually less, I insisted on a nasal exploration by Dr. W. E. Sauer.

The following is his report on the further steps in this case:

"When A. W. called on me on January 9th, 1909, the incision made by Dr. Alt had not closed and there was a continual discharge of pus from the wound.

On examination I found an opening through the upper lid just above the inner canthus. A probe could be introduced to the depth of at least two inches; a communication with the nose,

however, could not be made out. The rhinoscopic examination revealed a deviation of the septum with a large spur on the left side. There was no evidence of pus in the nose. The patient insisted that he had not noticed any discharge from the nose or into the naso-pharynx. The septal deviation and spur made the inspection of the ethmoid region very difficult. Not until after repeated examinations, was I able to detect any pus in the nose. I finally detected a small quantity of pus coming from above the middle turbinate. We then decided to open the external wound and open the ethmoid cells from the orbit. This was done on February 19th, 1909. A large amount of pus was evacuated and a communication with the posterior ethmoid cells was found. These cells were filled with granulations. The opening was enlarged; practically all of the orbital plate of the ethmoid was removed, and with it a portion of the middle turbinate. The external wound was allowed to close, and on February 28th there was no further discharge from the nose.

The patient presented himself on December 3, 1909. There was then no evidence of any pus in the nose, and he stated that he had not noticed any discharge."

FIG. 1.

The illustration (Fig. 1) is from a section of the granulations removed from the ethmoid cells by Dr. Sauer and plainly shows the ciliated epithelium.

After this radical operation the swelling promptly disappeared, the eye returned again to its normal position and motility. Since then the patient has had no further trouble. I had an opportunity to see him again in December, 1909, and found him in much better physical condition. The fundus and vision were normal.

It would undoubtedly have been better to have performed such a radical operation sooner, but, as the cyst seemed to be perfectly closed and no communication with the nasal cavities could be found, we thought that the attempt to remove the cyst from the orbit might suffice, although the origin of the cyst had with the greatest probability to be sought in a pocket of nasal mucous membrane situated in the orbit. Such a result seemed the more probable since there was apparently no nasal disease; in fact it took even as expert an examiner as Dr. Sauer some time to find evidences of pus in the nose. The complete drainage resulting from his operation promptly eradicated the disease.

WHY DOES OPHTHALMIA NEONATORUM CONTINUE TO CAUSE SO MUCH BLINDNESS?

J. J. Carroll (*Maryland Med. Jr.*, December, 1909) believes that blindness due to ophthalmia neonatorum has not been reduced as much as some writers state since the discovery of the Credé method of prevention. Statistics of the New York State School for the Blind show that more than 25 per cent. of those entering that institution have lost their sight from this cause, while in the Pennsylvania Institute for the Blind 36.4 per cent. of those entering during eight years since 1900 have been made blind by the same cause. In the Maryland School for the Blind, statistics indicate that blindness from ophthalmia neonatorum has been increasing. The histories of the pupils in this school show that about 29 per cent. of them are from the private practice of general practitioners while the author was unable to find a case coming from the regular lying-in-hospitals. This leads him to say that there are still some physicians who do not pay as much attention to the proper treatment of ophthalmia neonatorum as they should. Carroll believes that the best means of prevention is the use of silver nitrate solution immediately after birth, the accepted strength to-day being 1 per cent. instead of 2 per cent. as recommended by Credé.

OBITUARY.

EDWIN THEODOR SAEMISCH.*

Born at Luckau in the Nieder Lausitz September 30th, 1833, he studied at Berlin and Wuerzburg, and graduated at Berlin in 1858. Having passed the licensing examination he commenced the study of clinical ophthalmology under Albrecht von Graefe. He won his spurs at Wiesbaden, where he acted for 2 years (1860 to 1862) as assistant to Alexander Pagenstecher, and with him published the "Clinical observations from the eye hospital at Wiesbaden" (2 numbers, 1861 and 1862).† These booklets contain a wealth of clinical material from all branches of ophthalmology, and moreover an original paper by Th. Saemisch "On the use of moist heat in diseases of the eye."

Alexander Pagenstecher, with whom I got personally acquainted at his hospital, was a superior operator, an oculist of the first rank, but not especially gifted with a talent of speech and therefore for teaching. Thus Th. Saemisch largely taught himself by means of the Wiesbaden material. He found a diligent and careful teacher in Heinrich Mueller for the study of the finer normal and pathological anatomy of the eye.

In 1862 he habilitated himself in our specialty at Bonn. In 1867 he was made extraordinary and in 1873 ordinary professor of ophthalmology and director of the University Eye Clinic. Although he was twice called to other universities, he remained loyal to the Bonn University for almost half a century and found the task of his life in the teaching of the academic youth. He discharged his obligations steadily and manfully, stricter with himself even than with his pupils; the age of senility did not deprive him of his active force. In 1907 only, when 74 years old, he accepted a well deserved state of rest which, however, for him, meant nothing less than inactivity. In 1903 he had, to his great pleasure, been able to open the newly-built eye clinic. In 1908, when he celebrated his semi-centennial jubilee as a Doctor, his grateful admirers had his bust set up in the clinic.

Among the German physicians his pupils are legion. Among his former assistants I name only Dr. Peters, ordinary professor

*J. Hirschberg, Centralbl. f. p. Augenheilk., January, 1910.

†Besides Alex. Pagenstecher and Saemisch, Arnold Pagenstecher collaborated on the second number. The third one was published by Alex. Pagenstecher alone in 1866.

at Rostock, Professor Hummelsheim at Bonn, Dr. Count Wieser at Wiesbaden, Dr. Reis and Dr. Zur Nedden.

Saemisch was an extremely conscientious and careful operator who could pride himself on the happiest results. He has restored sight to many thousands of blind individuals.

He, also, enriched our science materially. His thesis of habilitation on "Contributions to the normal and pathological anatomy of the eye" (Leipzig, 1862) was followed by a monograph on "The serpiginous ulcer of the cornea and its therapy" (Bonn, 1870), in which he taught the incision through the cornea, which in the history of our science is recorded as Saemisch's operation.

We may mention further: 1863, hyaloid artery; 1864, visual disturbances due to lightning stroke; 1865, extraction of a foreign body from the anterior chamber, lateral hemianopsia from brain tumor; 1866, embolism of a branch of the central retinal artery, ætiology of detachment of the retina; 1867, rupture of retina and choroid, coloboma of the eye; 1869, vascular membrane in the vitreous body, leukæmic retinitis; 1891, shot wound of the orbit, fibroma of the sclera, results of the examination of an eye with cysticercus; 1895, filaria loa in the human eye; 1898, scabies of the cornea.

His most extensive work is the description of the diseases of the conjunctivia, cornea and sclera in the handbook of ophthalmology (1875, IV, I, 2, p. 1—368), which in more modern works had no superior until he himself revised it and gave to us at least the diseases of the conjunctiva (1904) in the beautiful volume of 740 pages, embellished with original tables (from preparations made by his assistants, Dr. Reis and Dr. Zur Nedden).

In his rectorate oration (October 18, 1892) he showed a broad view and unselfish acknowledgment of the merits of others. He spoke on the development of modern ophthalmology and gave the palm for the reform in ophthalmology, next to Helmholtz, to Albrecht von Graefe.

Saemisch kept away from all party strife, neither did he come to the congresses. He was to be found only in his clinic, or, during vacation time, in Switzerland, where I, too, had the pleasure of becoming personally acquainted with him and his excellent wife and of being permitted to enjoy the amiability and rare culture of this noble couple.

The most important and lasting work of Theodor Saemisch is the publication of the Handbook der gesammten Augenheil-

kunde (with Alfred Graefe, 7 volumes, 1874-1880), and of the second edition of this same handbook in 14 volumes, from 1899 till now, which after Alfred Graefe's death he had to edit alone. The immense task did not overwhelm him; on the contrary, as he told me, he considered it highly instructive. His exactness was unsurpassed. He helped every collaborator with the proof reading even. The pen fell from his hand only on the very day when he had to pay the tribute of everything earthly.

Since this handbook in reality contains the most complete description of our specialty, grateful posterity must needs lastingly honor the name of Theodor Saemisch.

DR. MEDICINÆ KARL THEODOR, DUKE IN BAVARIA.*

The readers of this widely distributed journal will certainly be glad to hear something about the life history of our colleague, sprung from a princely house, who has recently died. I, therefore, gladly accepted the invitation to give such a description, especially since during my service as first assistant at the Muenchen University Eye Clinic (1878-1886) I was in a position to follow the ophthalmic training of Duke Karl Theodor almost from its very beginning.

He was born the second son of Duke Max in Bavaria, who was a warm admirer and supporter of the arts and sciences. In 1869 Karl Theodor begun his studies of the natural sciences and of medicine at Muenchen, and concluded them in the regular way by passing the examination for the license to practice medicine which is demanded from every one in the whole of the German Empire. Even during his period of studying, extending over more than ten years, Duke Karl Theodor made original scientific researches. His first paper was in the field of physiology, "On the influence of the temperature of the surrounding air on the excretion of carbonic acid and the intaking of oxygen in the cat." In the pathological institute of the University he prepared the paper which was published in the 69th volume of Virchow's Archiv and translated into French by Bertherand, "On researches concerning the accumulation of leukocytes in the cortex of the brain," and the one printed in the Annals of the municipal hospitals of Muenchen on "Contributions to the knowledge of the finer changes in affections of the spinal chord."

*Professor O. Eversbusch, Centralbl. f. p. Augenhlk., January, 1910.

He was introduced into the pathological anatomy of the eye by Iwanoff; at this time he published a paper on "Contributions to the anatomy and pathology of the vitreous body" in the 25th volume of the Archiv fuer Ophthalmologie. Having worked for a time in the laboratory at Zuerich under Eberth, he communicated to the October number of the Centralblatt, in 1880, a paper "On the bacilli found in man." In the following years (1880-1886) he produced from the laboratory of the University Eye Clinic a short paper "On some anatomical changes in myopia," and in the 3rd volume of the Annals of the municipal hospitals of Muenchen, a "Contribution to the pathological anatomy of the eye in kidney diseases." As an independent work he described "A case of cornu cutaneum of the right upper eyelid" in the Festschrift for Hermann Helmholtz.

The clinical ophthalmic studies, begun under August von Rothmund, he continued by means of repeated and prolonged visits at the clinics and teaching courses of F. von Arlt, F. Horner and E. von Jaeger. He was, besides, greatly attracted also by the other Viennese clinics, especially that of Billroth.

It is well known how Duke Karl Theodor from the middle of the eighties to shortly before his painful fatal illness independently devoted himself especially to the operative side of our specialty, no less so than how unselfishly he gave all that was in him to those suffering from eye affections, no matter what was their social standing.

Thus the name of the "Herr Herzog," as the people called him, will in honor live beyond our days in the history of our science as that of a man who, disregarding the prejudices of the station to which he was born, assumed a civic profession which perhaps more than any other demands a consciousness of duty.

ROBERT MARCUS GUNN.*

M.A., M.B., C.M. (EDIN.), F.R.C.S. (ENG.).

Robert Marcus Gunn, whose death is so deeply deplored by his professional brethren, passed away on November 29th, 1909, after a painful and distressing illness borne with splendid courage. Descended from an old Norse stock, he was born at Dunnet, Sutherlandshire, in 1850, and was the last survivor of a family of two sons and two daughters. He leaves a widow and two

*Ophthalmic Review, January, 1910.

daughters. He received his early education at the late Thomas Fraser's school at Golspie, and proceeding subsequently to Edinburgh University he graduated there with distinction, obtaining the degree of M.A. in 1871 and that of M.B., C.M., in 1873. The history of his professional life and achievements has been already told by those who knew him well.† Here we can only give a brief record.

Gunn's professional career was very closely associated with the Moorfields Eye Hospital, to which institution he was deeply attached, and to which he gave many years of willing and valuable service, not less valuable in reference to teaching than in the care of patients.

At the time when he became incapacitated by his last illness, Gunn was Senior Surgeon to the Hospital. He was also Ophthalmic Surgeon to the National Hospital for the Paralysed and Epileptic, and in July last completed his term of office (two years) as President of the Ophthalmological Society of the United Kingdom. Greatly to the sorrow of its members, he was unable to occupy the chair at the last few meetings of the Society over which he had presided so ably and so successfully.

Gunn's connection with Moorfields Hospital began in 1873 when he became a student there, attending especially Mr. Couper's practice. From December, 1874, to June, 1875, he studied at Vienna under Jaeger, a period of studentship of which he retained very happy memories. In August, 1876, he was appointed Junior House Surgeon, and in December of the same year, Senior House Surgeon to Moorfields Hospital. The latter post he occupied for two years. He was an extremely efficient House Surgeon and during his term of office many important and lasting reforms were effected in the hospital work.

In 1882 Gunn obtained the diploma of F.R.C.S. (Eng.). He was elected Assistant Surgeon to Moorfields Hospital in 1883 and Surgeon in 1888. In 1886 he was appointed Ophthalmic Surgeon to the National Hospital for the Paralysed and Epileptic.

In 1898 he was Vice-President of the Section of Ophthalmology of the British Medical Association, in Edinburgh, and in 1906 he was President of the same Section at the meeting of the Association in Toronto. In the same year he delivered an address before the American Academy of Ophthalmology and Oto-Laryngology. In 1907 he delivered an interesting address on the value of Ophthalmic symptoms in general diagnosis and prog-

†See Lancet and British Medical Journal, December 11, 1909.

nosis,* and had arranged to take part in the Belfast meeting of the British Medical Association, but was too ill to attend.

Gunn was not a voluminous writer, but published a considerable number of papers, chiefly in the Transactions of the Ophthalmological Society, and the Ophthalmic Hospital Reports. He was also the author of several important articles on the Eye, in Treatises on Surgery and Anatomy, etc. His published papers all bear the stamp of great care and accuracy in their preparation and are written with marked attention to clearness of expression.

Gunn was greatly beloved, and respected in an equal degree, by those who knew him. Mr. Nettleship to whom we are indebted for much of the information in this notice, writes in these words: "Marcus Gunn's character might be described as little removed from that of the perfect knight—courageous and pure in mind and body, modest, but clear and strong in his convictions, sweet of temper, ready always to see the better side, scrupulous in giving credit where credit was due. He was a man of considerable intellectual gifts and brain power and an exceedingly keen and accurate observer; his mental grasp was strong, his judgment careful and well-balanced: a certain matter of fact simplicity was set off by a ready sense of humor. His influence with colleagues, students, and patients depended largely on the conviction that he was true and loyal to the core and never satisfied with slipshod methods or imperfect knowledge. Himself singularly guileless he was a good judge of character and motives in others."

*British Medical Journal, 1907, Vol. i, p. 1353.

MEDICAL SOCIETIES.

THE OPTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, December 9th, 1909.

Vice-President, Mr. W. H. H. Jessop, in the Chair.

A Case of Tubercle of the Choroid, shown originally on October 17th, 1907.—Mr. S. Stephenson.

This case was shown as one of tubercle of the choroid, a description of which will be found in the Transactions of the Society, Vol. xxviii, Fasc. I, and the condition of the fundus at that time is illustrated.

Mr. Stephenson showed the case again, and noticed the improvement that had taken place in the meantime; the treatment adopted was fresh air, and a tonic of iodide of iron; tuberculin injections had not been used. The vision in both eyes was 6/12. The right optic disc was pale as compared with that of the other eye, and the original changes were replaced by two contiguous greyish-white masses lying a short distance above and to the outer side of the disc; the inner part was speckled with pigment. There was still a defect for white involving the greater part of the lower and inner quadrant of the field of vision.

The left eye showed only slight retino-choroidal changes.

Abnormal Congenital Pigmentation of One Eye.—Mr. N. Bishop Harman.

Winifred B., aged 2½, shows the iris in the right eye almost black, so that at a short distance it is difficult to distinguish between the pupil and the iris. The fundus is a deep slaty blue black color, and the sclera in all parts shows many deeply pigmented blotches. The ocular and palpebral conjunctiva is not pigmented. There is nothing characteristic in the family history; the father has dark brown hair and light brown irides, and the mother has both dark brown hair and irides.

Mr. Harman referred to a similar case showed by himself in 1905, and reported in the Transactions, Vol. xxv, p. 318. He

also remarked on the frequent occurrence of unusual pigmentation in the sclera of black-haired dogs.

Retinal Nævi.—Mr. N. Bishop Harman.

Mary C., aged 61, attended the West London Hospital with the history of having lost consciousness in July of this year, though on recovery there was no loss of power or speech. There was some thickening of the arteries in the limbs. The vision in the right and left eyes with correction (which was +9 and +11 respectively) was 6/18 pt. Both fundi show indistinctness of the edge of the disc, with some development of connective tissue which in places follows the course of the vessels for a short distance; the latter are thickened and tortuous. The right fundus, in addition, shows 2 patches of red color which were considered to be either nævi or hæmorrhages; one, perfectly circular in shape, was situated over the lower nasal vein 2 P.D. from disc; and another smaller oval one a short distance from a cilio-retinal vessel.

The fact that these patches had existed for some time without altering their characteristics led Mr. Harman to consider them nævi of the retina in spite of the presence of vascular changes.

An Orbital Frame for Eyeglasses, and its adaptation for a Ptosis Prop.—Dr. Rayner D. Batten.

These orbital eyeglass frames depend for their attachment to the face on two rigid or nearly rigid wires attached to the lower part of the frame and accurately adjusted to the nasal margin of the orbit, and terminate in a free end lying immediately beneath the upper margin of the orbit. They are dependent, not on a spring, but on the accuracy of their fit; and by virtue of their application to the orbital margin require a more or less prominent eyebrow and a deep set eye.

Opacities of the Cornea of Unusual Character.—Mr. A. H. Payan Dawnay.

M. R., aged 21, came for advice regarding the condition of her left eye. The vision in the right was 6/6 with correction, and that of the left perception of light with indifferent projection. The conjunctiva of the left eye was healthy, the pupil inactive and incapable of dilatation owing to the presence of posterior synechiæ; the lens is cataractous, shrunken, and calcareous.

All over the surface of the left cornea are a number of elevations, some round and others oval-shaped 2 or 3 mm. broad, containing semi-translucent material. There was no vascularity and no infiltration of the corneal tissue.

When 5 years old this patient sprained her ankle, which was followed by an affection of knees, elbows, and some joints in the hands, resulting in ankylosis and permanent deformity. Not long after this the left eye "became bad," though no definite history of injury or disease could be obtained. There is no tubercular history in the family or in the patient herself, but there is extensive pyorrhœa alveolaris. The general opinion was that the corneal condition was of a degenerative nature, as a result of some quiet cyclitis.

A Hæmorrhage at the Macula.—Mr. Malcolm L. Hepburn.

Charlotte S., 41, complained that, on November 22nd, 1909, she woke up and found all objects appeared red to the left eye, and this condition had lasted ever since. There was no history of any serious illness, but she felt she had not been quite so strong as formerly since a bad confinement 10 years ago, and she was decidedly anæmic.

On December 1st, when first seen, the vision in the right eye was 6/9, and that of the left 1/60; the pupils were equal and acted well to light. On examination of the fundus of the left eye, there was present in the macula a perfectly circular dark-red hæmorrhage about 1½ disc diameters in size; the margin was distinctly darker all round the circumference than the other parts of the extravasation, and exactly in the centre of the patch was a brilliant white reflex. The relation of the retinal vessels to the hæmorrhage could not be accurately determined; and the field for white showed a central relative scotoma.

On December 8th, the hæmorrhagic area was decidedly smaller, and had diminished concentrically all around, the same well-defined edge being still present. The vision, however, remained the same.

The question arose as to whether this hæmorrhage was an ordinary subhyaloid or whether it was a hæmorrhage into the retinal substance, and if the latter whether the blood had is origin from the retinal or choroidal vessels. There was some difference of opinion on these points, but the view expressed by the majority was in favor of a subhyaloid hæmorrhage owing to the presence of the symptom of red vision.

PAPERS.

(1) *Description of a Form of Conjunctivitis.*—Mr. R. W. Doyne.

The onset of this particular variety of conjunctivitis was characterized by tickling in the eye, congestion of the ocular conjunctiva, more especially over the part exposed in the palpebral aperture, and generally spreading later over the rest of the bulbar conjunctiva; this is accompanied by pain and great irritability. There is little discharge, but the attacks were noticed to be accompanied by secretion from the Meibomian glands. Cultures were obtained, with the result that staphylococcus aureus was cultivated, and Mr. Doyne regarded the conjunctivitis as due to an infected condition through the Meibomian glands. These attacks recurred about every 10 days, and took from 6 to 12 days to clear up.

The treatment adopted was staphylococcal injections once every 10 days, and local application of argyrol to the conjunctival sac. For 3 months afterwards no attack occurred, and the patient went to West Africa, where the condition again relapsed. When home on leave he was treated in the same way and kept free for 6 months.

(2) *Myopic Degeneration of the Lens (with a patient).*—Mr. R. W. Doyne.

On December 13th, 1888, Mr. Doyne showed a case of "Peculiar form of degeneration of the lens" in a lady of 70; the refraction through the periphery being —3 D, and that through the centre —14 D. At the time the case was criticized and regarded as one of posterior lenticonus, but Mr. Doyne considered that the condition described as degeneration was characteristic though not generally recognized. With oblique illumination there appears to be a dense opacity in the centre of the lens which at first seems difficult to regard otherwise, but this opacity is really only apparent, and is produced, according to Mr. Doyne, by the reflection of the rays of light from the sudden increase in the refractive index towards the centre of the lens. On ophthalmoscopic examination the retinal vessels are distorted.

(3) *Note on a Form of Iritis.*—Mr. R. W. Doyne.

The type of iritis here alluded to has been given the name of guttate iritis, and is characterized by small spots resembling drops of lymph on the pupillary margin; it is a rare condition but a

definite type, generally seen in elderly people more commonly women, who are obviously gouty. These spots arise without any obvious sign of inflammation, and it is only when they adhere to the surface of the lens that inflammatory symptoms arise, though it is not uncommon for iritis to occur at parts other than where the spots exist. Apparently cases showing this condition are liable to attacks of iritis. Mr. Doyne thinks they may be due to exudation between the epithelial layers of the iris which are reflected at the pupillary margin, and he also finds that these guttate spots do not readily become adherent to the lens with which they are in contact.

(4) *A Note on Family Choroiditis (with patient).*—Mr. R. W. Doyne.

A patient was shown illustrative of cases of family choroiditis; several colored drawings were brought before the Society in March, 1899, representing the fundi of four members of a family showing this variety of choroiditis. The appearance is one of guttate choroiditis affecting the disc macula region, the spots being closely grouped, separated sometimes by pigmentation, but more often by none. The disease comes on in adult life, and there appears to be no special family diathesis associated with it.

A Congenital Sarcoma of the Orbit.—Mr. M. S. Mayou.

A. P., aged 12 days, attended the Central London Ophthalmic Hospital on March 13th, 1908. This was the first child, and apart from the eye it presented no congenital abnormalities. The right eye was perfectly normal, but filling up the left orbit and protruding from it was a red, slightly œdematous, mass; it was irregular on the surface and covered by conjunctival epithelium except in one part where it was exposed in the palpebral aperture, and here some ulceration had commenced to take place. There was no enlargement of the pre-auricular gland.

The orbital contents were eviscerated, and the diminutive globe, situated behind the tumor, was cut into at the time of the operation. On June 16th of the same year the child returned with a recurrence filling the entire orbit. Evisceration was again performed, and four weeks later the child was lost sight of and has not been heard of since, though no record of death can be found from official returns.

On microscopical examination, the anterior parts of the globe were found to be normal; the posterior part was intimately con-

nected with the tumor. The growth itself consisted of cell bundles which were arranged in different directions and showed no mitosis; the character of the cells and their arrangement were typical of spindle-celled sarcoma. Sarcoma of the orbit is by no means uncommon in young children, but congenital tumors of this nature are distinctly rare.

A Round-celled Sarcoma of the Lacrimal Gland.—Messrs. A. P. L. Wells and M. S. Mayou.

M. A., a female, aged 66, was admitted into the Central London Ophthalmic Hospital on January 14th, 1907, with a swelling at the upper and outer part of the left orbit which had lasted about four months. The tumor was about the size of a walnut with irregular surface, soft and almost fluctuating. By April 8th it had increased in size so much that the eye was displaced downwards, but the neighboring glands were not enlarged, and there was no dissemination. The tumor was excised and found to be encapsuled.

On microscopical examination, the growth was surrounded by a capsule which in places was infiltrated with round cells of the size of ordinary lymphocytes, and these formed the bulk of the tumor. There were no signs of degeneration, but mitosis was well marked. Scattered throughout the specimen were remains of glandular epithelium which had undergone changes; some new vessels were observed, and others which obviously belonged to the original gland tissue.

Tumors of the lacrimal gland are difficult to classify owing to the difficulty in recognizing their source of origin, as well as to the fact that secondary changes have altered their structure. According to whether they arise from the epithelial elements, the fine mesoblastic supporting trabeculæ, or the lymphoid tissue, so we meet with adenomatous carcinoma, myxosarcoma, or lymphosarcoma.

Mr. Mayou entered into the literature of sarcoma of the lacrimal gland, of which nine cases appear to have been described, all in patients over 38; one probably only attacked the gland secondarily from the orbit, and 2 others were bilateral and of the nature of endotheliomata. The characteristics of these tumors are that they occur late in life, are of very slow growth, do not tend to infiltrate rapidly, and do not lead to glandular enlargement.

MALCOLM L. HEPBURN.

ABSTRACTS FROM MEDICAL LITERATURE.

By J. F. Shoemaker, M.D.,

St. Louis, Mo.

THE ADVERSE INFLUENCE OF DIABETES IN CERTAIN OPERATIONS ON THE EYE.

Charles Stedman Bull (*Med. Record,* Oct. 2, 1909) says that it is well known that operations on the eyes of patients with advanced diabetes have been followed by fatal results, the patients dying in coma. During the coma the urine is usually free from sugar, even if it has been abundant prior to the attack. The coma may set in within twenty-four hours after the operation, or it may be postponed for several days. In some of the cases which were followed by unfortunate complications, the diabetes was accompanied by gastrointestinal symptoms and by enlargement of the liver, but the latter gradually subsided. It is probable that the pancreas was also diseased in these cases, as chronic pancreatitis is of very frequent occurrence in chronic diabetes. A prolonged and close observation of the cases under his care, which were followed by various complications, seemed to offer evidence of a greater deficiency of fermentative action than in other cases free from these complications. Whether psychic, nervous, or organic influences were originally at fault in these cases, it was evident that the prognosis for operation was more unfavorable, the more marked was the defective metabolism of the carbohydrates. Whether this failure of fermentative action in these cases occurs through the blood current and tissues of the body, or in the digestive tract, we do not yet know. It is not wise to introduce a strict antidiabetic regimen in a patient immediately before operating, especially if the patient has not been accustomed to it. On the other hand, such a regimen, to which the patient has for a considerable time become accustomed, should not be interrupted at the time of operation. In other words, any change from the general routine of nutrition should not be made in any patient immediately before the operation. The complications which have occurred in his experience after operations on diabetics, have been mainly either iritis, hæmorrhages into the anterior chamber, or an infection of the wound as manifested by slow healing. In the cases of iritis there was a marked macera-

tion of the pigment epithelium of the iris, a fact long since pointed out by Snellen. He has also noticed a rather marked tendency to infection by microorganisms after operations on diabetics, and it is known that this has been observed in other branches of surgery. In view of these facts it would seem wise to have tests made of the bactericidal power of the blood serum in diabetes. Bull gives an analysis of 115 cases, and concludes that we must carefully distinguish those diseases which are directly due to diabetes as a cause from those which may occur independently of the disease. The abnormal products of metabolism, acetone, diacetic acid, and oxybutyric acid seriously complicate the prognosis, and must, as far as possible, be eliminated before any operation is undertaken. Arteriosclerosis plays an important rôle in the ætiology of the disease and its complications. The prognosis does not depend on the percentage of glucose in the urine, but on the degree of acid intoxication. The possible connection between diabetes and tuberculosis needs more searching investigation before any positive opinion can be formed.—*N. Y. Med. Jour.*

THE TREATMENT OF RECURRENT HORDEOLUM.

Aaron Brav (*N. Y. Med. Jour.*, Sept. 18, 1909), for clinical and pathological purposes, divides hordeoli into two classes: (a) The external, or Zeissian, hordeolum, and (b) the internal, or Meibomium, hordeolum. The latter, being seldom of a recurrent type, is not discussed by him. The external hordeolum, however, frequently recurs and resists treatment indefinitely, often so far as a permanent cure is concerned. It is a circumscribed inflammation of the glands of Zeiss which results in suppuration, the staphylococcus being the infecting microörganism, which gains access to the glands through the orifices of the hair follicles. Errors of refraction, any of the forms of blepharitis, and constitutional dyscrasia, such as scrophulosis anæmia or any of the debilitating diseases, are predisposing causes. Since this condition is generally a mild, self-limiting inflammatory process, energetic measures are not called for and are not advisable. He condemns the application of carbolic acid or tincture of iodine to the orifice of the hair follicles, and recommends the application of hot, moist applications for several hours. When much pain is present a small incision, followed by hot applications hastens the recovery. This with some cleansing and soothing lotion is all that is necessary in the case of an ordinary hordeolum. When

dealing with the recurrent type, however, the underlying cause should be sought and removed if possible. Errors of refraction should be corrected, the nasal passages cleansed with some antiseptic solution, the bowels kept acting freely and any constitutional fault corrected. The author usually administers the compound syrup of hypophosphites. After the stye has disappeared he has the patient massage the edges of the lids each night after smearing on an antiseptic ointment of mercury bichloride, gr. ½ to the ounce of white petrolatum. This is continued for a period of four weeks, by which time the disease should be cured.

DISEASE OF THE OPTIC NERVE AS AN EARLY OR EARLIEST SYMPTOM OF MULTIPLE SCLEROSIS.

A. Gordon (*Arch. of Internal Medicine,* June, 1909) has had under his care the past seven years fifty-six cases of multiple sclerosis, all of which presented the classical symptoms of this disease. Twenty-three of these patients showed optic nerve changes, and of these twenty-three cases five are excluded from the report because the optic neuritis and atrophy were the earliest or the only sign of the disease. It was impossible to determine in how many of the cases the optic nerve changes were the first symptoms, as when they came under observation the whole symptom-group was present; but in eight of the eighteen patients it was found by close questioning, that disturbance of vision in one eye first attracted their attention. The eighteen patients presented the following changes in the optic nerves at the time of examination:

Optic atrophy was present in eleven patients, being unilateral (left) in eight of them, in two more marked in the left eye than in the right, and in one bilateral and equal. In the three bilateral cases the atrophy always began on one side, but developed soon afterward on the other side. In the unilateral cases the condition was confined to one side for a long time, but eventually the other eye became affected. In the other seven of the eighteen cases retrobulbar neuritis was present at the time of examination, and continued for a period of from two to five months and was followed by optic atrophy. In all of the eighteen vision was much impaired from the first. Scotomata were found more on one side than the other. In the cases of atrophy scotomata were marked on both sides. Central vision was preserved generally. Gordon has had five cases in which the optic nerve changes ap-

peared very early or were the only symptoms of the disease for some time. In three of them the classical symptoms of multiple sclerosis developed later. These early changes in the optic nerve constitute the chief interest in the subject.

ON CASES OF DIFFICULT IRIDECTOMY.

M. Dufour (*The Ophthalmoscope,* August, 1909) describes a modification of Gayet's method of operating for iridectomy which he finds of great value where the anterior chamber is very shallow. Gayet opened the globe by making a sawing motion with a scarificator in such a manner that the incision was made at a tangent to the upper edge of the cornea. After thus entering the anterior chamber the wound was enlarged by making two cuts with a pair of scissors, one on either side. Dufour finds it easier and better to enlarge the first opening by using a pointless knife in place of the scissors. He finds two small bent knives more satisfactory than a straight one. This method is recommended where the iris lies in contact with the cornea as in anterior synechia, in cases of seclusio pupillæ and in certain cases of glaucoma where the anterior chamber is extremely shallow and the cornea is opalescent. In all of these classes of cases it is almost impossible to do a proper iridectomy by direct transfixion. Those who try this method are warned to continue the sawing motion, once they have begun it, until the anterior chamber is entered, as if the scarificator is lifted from the cut before entering the anterior chamber the chances of getting it back again are not very good. Also, before using the pointless knife it is well to assure one's self that the anterior chamber has been opened, by introducing a curette.

THE RELATION OF THE VISUAL FIELD TO THE INVESTIGATION OF CERTAIN PSYCHOSES AND NEUROSES.

G. E. de Schweinitz (*Penn. Med. Jr.,* Jan., 1910), after analyzing the different phenomena of the various types of fatigue field, discusses the pathogenesis and diagnostic value of the fatigue fields and offers the following conclusions:

(1) There is no form of visual field pathognomonic of neurasthenia, but, other things being equal, a typical fatigue field is important in the symptom-complex of this disease.

(2) Perimetric examination has a certain value in the differential diagnosis of hysteria and neurasthenia, inasmuch as a typi-

cal fatigue field of any of the varieties already named is more likely to be found in a pure neurasthenia than in hysteria or hystero-neurasthenia. A stable concentrically contracted and tubular field, with inversion of the color lines, is a strong indication of hysteria, but such a visual field is not diagnostic of this psychosis and may be produced by conditions already named.

(3) Fatigue phenomena of the visual field are not limited to the periphery, but may appear in its center, and interpret macular exhaustion and are equally important from a diagnostic standpoint.

(4) Certain varieties of central exhaustion scotomas are with difficulty distinguished from other central scotomas, the result of mild or attenuated forms of retrobulbar neuritis. In each instance it is possible that the phenomena depend upon an œdema of the optic nerve axis near the foramen.

(5) Slight forms of macular fatigue, so common in neurasthenic patients, probably explain many of the failures to relieve by glasses the asthenopia which is so prominent a symptom of many of the patients.

THE SIGNIFICANCE OF OPTIC NEURITIS.

J. S. Risien Russell (*The Ophthalmoscope,* Sept., 1909) discusses intracranial tumor and some of the other conditions which have been held to cause optic neuritis which must be differentiated from brain tumor. He believes too much importance has been placed upon anæmia as a cause of optic neuritis. In all of his experience he has seen only one case in which optic neuritis was present where there was any considerable degree of anæmia. On the other hand in certain diseases where there is very marked anæmia together with acute destruction of nerve tissue, optic neuritis is never found. When it is present in cases of anæmia he is inclined to believe that it is caused by thrombosis of an intracranial sinus or vein rather than to the effect of the changed blood on the optic nerve. Since headache is frequently present in this class of cases brain tumor should be thought of; but before such a diagnosis is made syphilis must be first excluded. This can be done best by the Wassermann serum test and by lumbar puncture, with the estimation of the number of lymphocytes in the cerebro-spinal fluid. The therapeutic test cannot be accepted as final since non-syphilitic conditions may yield to anti-syphilitic treatment or may even disappear without any treatment. But if the Wasserman test be positive and the number of lymphocytes in the cerebro-spinal fluid be greatly in-

creased it is reasonable to believe that the optic neuritis is due to a syphilitic lesion. If syphilis be positively excluded should disseminate sclerosis be thought of as being responsible for the optic neuritis? Russell thinks not. In a large experience of disseminate sclerosis he has never been able to find optic neuritis present in a single case. In this disease, while the symptoms referable to the optic nerves resemble those present in retrobulbar neuritis, the pathological process which causes them is the same as that present in other parts of the system and is not a neuritis. In some cases where all of the more usual causes of optic neuritis may be excluded and the only cause which seems probable is that of a brain tumor, the symptoms sometimes improve and may entirely disappear with the exception of the eye symptoms. Where the optic neuritis has gone on to atrophy there may be blindness left after all the other symptoms have subsided. Where cases of optic neuritis due to increased intracranial pressure are seen before atrophy sets in the author strongly advises operative procedures to relieve the intracranial pressure. He agrees with Sir Victor Horsley in considering that "optic neuritis may have not only a diagnostic, but also a localizing value, and that the eye which presents the older and more severe neuritis usually corresponds to the cerebral hemisphere in which the morbid process, which is responsible for the increase of cranial pressure, is most likely to be found."

SYMMETRICAL LYMPHOMATA OF THE LACRIMAL AND SALIVARY GLANDS (MIKULICZ'S DISEASE).

S. Lewis Ziegler (*Trans. Am. Oph. Soc.*, 1909) reports two cases of this disease and summarizes the important points of his article as follows:

"1. Careful differentiation of the symptom-complex described by Mikulicz demonstrates that this disease is a pathological entity, sui generis, and not associated with any systemic disease.

2. The syndrome of symmetrical enlargement of the lacrimal and salivary glands is sufficiently characteristic to be accepted as pathognomonic of Mikulicz's disease.

3. The enormous lymph-cell infiltration into the interstitial tissue, and the relative passivity of the gland structure, demand that this tumefaction shall be classed as true lymphoma or lymph tumor, as distinguished from adenoma or tumor of the glandular substance.

4. As no specific bacteria have been discovered, either in the glands or in the blood, the pathogenesis is probably chemotatic,

thus causing a localized toxic hyperleucocytosis in the affected glands.

5. Toxic fluids that are chemically irritating are probably absorbed from the accessory sinuses (chiefly antrum) and transmitted through the lymphatic capillaries to these contiguous glands.

6. Respiratory obstruction not only hinders the evaporation and drainage of these sinus secretions, but also causes suboxidation and other disturbances of metabolism. It should, therefore, be considered a true ætiologic factor.

7. The diagnosis of tuberculous adenitis and of lympho-sarcoma has been repeatedly proven wrong by the spontaneous involution of the lymphomatous glands.

8. The glandular enlargements of leucemia, pseudo-leucemia, syphilis, lipoma and carcinoma are so characteristic that they should easily be differentiated.

9. The course of Mikulicz's disease is chronic, but the prognosis is favorable, with a tendency to relapse.

10. The treatment aims to improve lymphatic action and systemic oxidation. Arsenic, the iodids, pilocarpin, thyroid extract, and the x-rays have each shown some field of usefulness. All respiratory obstructions must be promptly and thoroughly removed. Extirpation is rarely indicated."

REVIEWS.

OPHTHALMIC SURGERY. A treatise on surgical operations pertaining to the eye and its appendages, with chapters on para-operative technic and management of instruments. By Charles H. Beard, M.D. With 9 plates, showing 100 instruments, and 300 other illustrations. Philadelphia, 1910: P. Blakiston's Son & Co. Price $5.00.

This is the first separate book on ophthalmic surgery published in this country. That it is written by a man competent to treat on this important subject, qualified as well by his training as by his own experience, a careful operator and one of good judgment, must be evident to any one familiar with the subject, as soon as he has looked through this beautiful volume. Both the text and the illustrations cannot help but impress themselves on the reader. Its perusal will prove a source of real enjoyment to those working in the same field, and will undoubtedly be of great help to students and those preparing themselves for ophthalmic work.

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